DOCUMENT RESUME

ED 123 139 SO 008 922

AUTHOR Wilcox, Leslie D.; And Others
TITLE Social Indicators and the Measurement of Social Development in the Third World: Constraints and Potentialities.
PUB DATE 26 Feb 75
NOTE 36p.

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS Comparative Analysis; *Developing Nations; *Development; Economic Development; *Measurement Goals; *Measurement Techniques; *Social Change; Social Environment; Social Science Research; Sociology
IDENTIFIERS *Social Indicators

ABSTRACT

This study discusses the relevance of social indicators for usage by less developed countries, examines the contexts in both the less and more developed countries with which social indicator methodologies must be compatible, and proposes a functional theory of society and societal development which offers a meaningful approach to social indicator construction. The method used was to test the theory and feasibility of social indicator methodologies by drawing general guidelines of how to measure the political, economic, social, cultural, and technical contexts of a given society, allowing for specific country variation. An examination of the implications of "functional theories" for conceptualization and measurement of social development is presented along with a brief description of society and its interrelated parts. The finding is that, due to the particular level of social development and cultural conditions characteristic of most less developed countries, certain of the social indicator approaches originating in the more developed countries are more feasible than others. A limitation to the effectiveness of social indicators such as are discussed in this paper is that unless there is reasonable potential for the institutionalization of social indicators in the context of Third World development, the indicator's role is likely to be restricted to serving academic research rather than aiding the guidance of national development. (Author/DB)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

ED123139

"Social Indicators and the Measurement of Social Development in the Third World: Constraints and Potentialities."

by

Leslie D. Wilcox
Wm. Alex McIntosh
John Callaghan

RECEIVED
NOV 5 1975
NMSU
E.R.I.C.

SP 008 922

Department of Sociology and Anthropology
Iowa State University

February 26, 1975

(This paper does not necessarily reflect the views of The Agency for International Development)

At first glance the prospects for constructing social indicators relevant for usage by less developed countries (LDCs) appears quite promising. Planners in many of these countries are deeply concerned with those vary factors motivating the construction of social indicators in the more developed countries (MDCs) of the world. Moreover, planners are aware that some proponents have declared social indicators to be an important means of measuring social change at both the individual and societal levels of organization. Parallel to this is the keen interest of the Third World in national development and social change. For many of these countries, successful development has become a matter of national prestige.

Social indicators also seem to offer strong potentiality as management tools in policymaking and planning. Although considerable disagreement exists as to exact nature of their role (Land, 1972; Sheldon and Parke, 1974; Moser, 1973), research has shown that social indicators can play a significant part in monitoring societal development and assessing societal development policies. Much of the developmental change taking place in LDCs is instigated and directed by plans and policies formulated by national governments. In fact, planning in the Third World is second only to the socialist countries in its extent of institutionalization and persuasiveness. As Myrdal notes, the LDCs, lacking a significant proportion of the wealthy willing "to risk their funds in production investment rather than in speculation and quick profit ventures," and desiring to bypass many of the steps of the Western nations' development experience, look to national and regional planning as the means to their modernization (1968:135).

Given this congruity between the desires of the LDCs and the proposed purposes of social indicators, we might expect a ready diffusion of social indicator method and procedure from the industrialized countries to the industrializing.

Already the potentialities of social indicators have been recognized by many in the international community. For example, the Organization of Economic Cooperation and Development, most of the UN family of organizations (FAO, WHO, UNESCO, UNRISD, ECAFE, ILO, etc.), and the Bariloche Foundation have begun social indicator programs and have published initial recommendations. On the basis of such work, the content areas for social indicators have been given partial specification, certain existing statistical series have been evaluated for their utility in social indicator construction, and several "core" indicators have been derived empirically.

The relevance of social indicators within the policymaking/planning context for any nation should not be taken for granted, however, for serious questions have yet to be satisfactorily addressed especially with regard to the LDCs.

In particular, two serious issues having to do with the relevance of social indicators will first have to be resolved. The first concerns the operational relevance or feasibility of social indicator methodologies. If social indicators are to play a significant part in the development and assessment of policies and plans, then social indicator methodologies must be attuned to the context in which policymaking and planning occur. On one hand, this necessitates an understanding of the processes involved in policymaking, planning, plan implementation, plan assessment, and statistical generation, as well as the interrelations among these processes. On the other hand, the social, political, economic, cultural, and technical environments that delimit those processes must also be taken into account. Unless there is reasonable potential for the institutionalization of social indicators within this complex context, the indicators' role is likely to be restricted to serving academic research rather than aiding the guidance of national development.

A second consideration only rarely addressed by social indicator proponents is the need for strong linkages between indicators and theory. Theory, even in its most rudimentary form, performs two important functions for indicator research. First, it provides a "context from which the contents of specific social indicators follow" and second, it gives "direction for the assessment of social change" (Land, 1972:26-27). Thus theory helps specify the content of measurement, and at the same time points to those structures and processes that can be expected to change.

The consideration of theory is particularly crucial for the construction of indicators reflective of the processes and outcomes of social development. Such indicators must address the human and societal problems with which social development is concerned if they are to have utility for policymaking and planning in the LDCs, and social theory is perhaps the best means of organizing and predicting the interrelationships among the various levels of developmental problems.

Unless the issues of theory and feasibility are considered in the development of social indicator methodologies, social indicators could fail to become established in many nations, particularly those of the Third World. In this paper we examine first the contexts in both the less and more developed countries with which social indicator methodologies must be compatible, and suggest with reference to the particular conditions characteristic of most LDCs that certain of the social indicator approaches originating in the MDCs are more feasible than others. Following this we discuss the need for greater reliance on social theory in order to insure that social indicators adequately reflect these processes and products of social development. Finally, we propose a functional theory of society and societal development which offers a meaningful approach to social indicator construction.

Constraints on Social Indicator Institutionalization

Social indicators for use in policymaking and planning can be thought of as improvements in a country's "information system." An information system, as is referred to here, consists of a relatively integrated set of available social statistics selected and organized on the basis of potential relevance to social policymaking in development planning. The design of improvements in the information system of any country must match the country's needs and capabilities. Innovations and alterations that disregard the information requirements of planners and policymakers, or outstrip economic, technical, and other capabilities can scarcely be called improvements. More specifically, activities designed to expand an information system are improvements only when they are feasible within the political, economic, cultural, and technical contexts of the given society (Wilcox, et al., 1974:46).

Political

In every nation the confluence of political parties or factions, modes of political operation, and exigencies which the group in power perceives as policy issues place limits on the kinds of information available to planners, or, once available, the kinds of information they will use. For example, the very definition of poverty and the recognition of those groups affected by it ofter are politically determined, as are the kinds of information collected and analyzed (Rose, 1971:125; Seers, 1972:124). In some nations this means that information reflecting the status of inequality among society's disadvantaged groups will not be collected, analyzed, or documented unless these groups are adjudged as relevant within the current political context (Hauser, 1969; Dunn, 1972). Thus certain population categories may receive less attention when data collection is carried out for the purposes of assessing the needs and problems of

the nation. In an example provided by Keller, "unemployment statistics for the low-income neighborhoods of central cities" were discontinued, for they reflected a general lack of improvement in employment of blacks relative to whites, thus calling into question the effectiveness of certain U.S. government programs (1973:142).

Furthermore, in a number of countries, the concern for privacy has become a politically charged issue, forcing the governments of these nations to place restrictions on what might normally be considered the realm of science and technology. Thus the national population censuses of certain nations, for example, have had items deleted--not because the items had no information worth, but because of their potential political impact. Also, in the United States and Br'tain, pollsters report significant increases in the number of interview refusals.

Apparently there is less concern for privacy in the LDCs; it seems to be a cultural characteristic for many of the more advanced countries. The privacy factor could be, however, even in LDCs, an important political consideration that will place great constraints on the types of data that are or can be collected. The majority of governments in these countries can be characterized as both authoritarian and paternalistic. Their citizenry is generally nonresponsive, apathetic, and uninvolved in political affairs beyond the confines of the local community. This lack of citizen participation is due first to traditional uninvolvement and second, to a continued lack of opportunity to become involved. In such a context, government essentially sees its role as caretaker of the needs of the people as it chooses to define those needs. Furthermore, as the government generally receives most of its support from the middle and upper classes, it is less interested in the expressed needs and opinions of the poor (Wolfe, 1973). In fact, expressions of dissatisfaction by the rural or urban poor are often perceived as indications of subversion rather than genuine needs.

A political context which includes paternalism, authoritarianism, fear of subversion on the part of government, and apathy on the part of the majority of citizens places constraints on the range and content of information available for social development planning. Social conditions perceived as irrelevant by the government will not be subjected to measurement. On the other hand, certain indicators of human welfare might be introduced but applied only selectively to various segments of the population. The introduction of social indicators themselves is not likely to alter a government's level of concern for a particular deprived group.

It is highly unlikely in such circumstances that the regular collection of subjective social data will become a part of existing statistical series. Subjective studies, designed to tap the feelings and perceptions of the populace, are unlikely to be used in a situation of paternalism and fear of subversion. From a paternalistic standpoint, perceptions of well-being will not be seen as "valid" indicators of human needs, since only the government is capable of making that determination. Furthermore, information based on such subjective indicators would appear to those in power more threatening than enlightening.

Economic

The process of development planning entails the allocation of finite resources to programs designed to deal with what often appear as "infinite problems." Planning involves priority--setting among programs and the problems with which a society will deal at a particular point in time. On the basis of these priorities, scarce resources such as funds, skilled workers, equipment, and time are allocated.

The decision to invest in a program to implement a particular social indicators methodology involves setting priorities in regard to current and

future information needs. Such a decision necessarily entails prior consideration of the resources available for a proposed program's implementation.

In many LDCs skills are often one of the scarcest of the resources that must be allocated among tasks in order to achieve various purposes. In this regard, the allocation of skilled personnel to generate information will depend upon the perceived favorability of the cost/benefit ratio between the value of the increased amount of information as assessed against the value of greater programs and allocations in substantive development planning areas. Should the benefit of more information outweigh the loss of the potential output-increment in the other areas, the skills will likely be assigned to the more valued task.

Time is also a factor in the trade-off between costs and benefits associated with choices among activities. The generation of social data generally occurs at a later point in time than does economic or technical data. Furthermore, the establishment of social trends in the form of time series data requires a longer time span (Rose, 1971:124). While data on certain social conditions might represent benefits manifestly greater than the cost of the allocation of resources in the short run, the total cost of the information in the longer time span may negate the perceived benefits. Innovations, to the extent possible, must be conservative in their resource requirements if they are to be accepted.

Consideration of the "cost-benefits" of social indicator methodologies raises questions about the current economic feasibility for implementation by less developed countries of the approaches to indicator construction currently proposed in the United States and Europe. Possibly many of these approaches are infeasible in the light of a present resource availability in most LDCs. Duncan's (1969) promotion of replication studies in the United States appears, for example, less viable for the Third World. The assumption (perhaps a valid one for the industrialized nations) is that there are sufficient, potentially useful studies from which to choose. With the exception of a few

of a few LDCs such as Colombia and Thailand[1] which have been studied extensively by international and indigenous research teams, it appears that most low income countries have few studies on which to base replication procedures. It should, however, be noted that while many social science research projects have been carried out for decades in various LDCs, many of the research results were never made directly available to the countries under study. Most of this research was carried out for basic scientific purposes rather than for usage by the nation under study; thus information and results relating to social development policymaking and planning were more often published in Western scientific journals rather than transmitted to these countries.

Furthermore, the allocation of resources for construction of indicators for such societal concerns as alienation, ethnic prejudice, or sex discrimination, while potentially enlightening, appear impractical for less developed country implementation. Not only is the cultural validity of Western-based indicators of such concepts as alienation in the low income countries being questioned, but there is doubt as to their priority, since in most LDCs the basic problems of human survival, namely health, food, and shelter are paramount. This is not to suggest that alienation, ethnic discrimination, and inequality between the sexes are not real issues in the less developed areas of the world, but that only after the critical survival problems are ameleorated will there be much concern for the policies that now are priority issues in the MDCs.

The United Nations Economic and Social Council proposes an approach which is basically inductive and rests on commonly collected national statistical series. This so-called "system of social demographic statistics" begins with the basic components of a social-ecological model which are suggestive of the types of social statistics required for a societal information system. Although

the Council's selection of compenents is unnecessarily restricted in scope--agriculture is unaccountably excluded--this more inductive approach, emphasizing the utilization of existing statistics selected on the basis of a general organizing framework, is one of the more practical and economically feasible approaches for LDCs. This approach begins with an examination of the census, vital records, and household and other surveys in order to determine the extent to which they reflect the societal, institutional, and human conditions of interest. In such an examination, data gaps may be identified and suggestions made for information additions to existing data collection techniques--and in certain cases. for special surveys It should be noted, however, that there are limitations to special surveys and to the expansion of existing data sources. For example, there is a limit to the range of content a household survey can adequately handle, with the result that additions must be exceedingly selective. On the other hand, scarcity of resources will constrain the number of new surveys instituted. Special purpose surveys are least likely to yield trend data since they are generally instituted only to fill a temporary information need.

Social

A common characteristic of the political structures of most countries is their bureaucratic rigidity and inability to initiate innovations. As a result, changes in bureaucratic structure are generally more evolutionary than revolutionary in nature. Generally there is a lack of cooperation among various government agencies, not least among those administering similar or related programs and policies. Absence of cooperation among agencies that are a part of the same administrative unit is all too frequent. Of particular concern is the lack of coordination and cooperation among planning and statistical units. Planners, of course, are partially dependent on statistical data to formulate realistic plans and statisticians are partially dependent upon planners for

suggestions as to what sorts of data are more relevant for collection. Frequently planners and statisticians fail to acknowledge their interdependence and instead attempt to act without regard for one another. The result is the generation of unsuitable data by statistical agencies and the formulation of plans without a firm basis of statistical knowledge (McIntosh, et al., 1974). In recognition of this problem, some governments have instituted national committees made up of planners and statisticians to attempt to bring about cooperation (e.g., Economic Commission for Asia and the Far East, 1970).

Suitable social indicators are not likely to be developed in the absence of harmonious bureaucratic relationships. But interest in such construction can become a common agenda linking planning data requirements to the generation of statistical series. Constructing an integrated set of social indicators then becomes an issue of national policy, and both statisticians and planners are forced to come to terms with one another's needs.

Technical

Finally, the technical capacities of both the planners and the statisticians constrain the range and types of information that can be developed. Of those involved in data generation there generally are a few highly trained statisticians capable of generating and analyzing social statistical data. However, in LDCs their number is even more limited than in other countries, thus restricting the amounts and kinds of data the information system can generate. Even more limiting are the capacities of planners to sift through information that is either too voluminous or technical in nature (Rose, 1971:125).

Furthermore, the sophistication and summary value of the more complex indicators are subjects to technical constraints. Complex indicators or models have many advocates among the students of development planning. Unfortunately, the utility of some currently proposed complex or synthetic indicators

is questionable. One example is the health status index which Bush, Fanshel, and Chen (1972) have been attempting to develop. This index has dimensions of function levels, prognosis, and duration and is illustrative of one of many approaches to a health index. However, since the "functional status index is based on a data base that doesn't really exist" (Tunstall, 1972:90), it is not immediately clear whether this particular index could be used to distinguish population subgroups with different levels of health or to chart progress in achieving higher levels of health. And, as HEW (1972:55) has noted, ". . .efforts to develop indices of health have not produced measures which have proved broadly useful." It seems apparent that more work needs to be done, including modification of present concepts and further development of data sources before satisfactory complex social indicators become available.

Cultural

To a greater or lesser degree countries may differ as to areas they consider to be of development concern. However, it is likely that those broad areas (sectors) chosen for priority consideration will be rather similar from country to country. These sectors, social goal areas, or areas of social concern act as an organizing framework for social indicator methodologies in that they generally cover the human and societal concerns reflected in societal institutions and public policies. Specific social concerns within these general social goal areas are more likely to vary between countries and it is these concerns which social indicator researchers seek to identify and measure. What constitutes adequate housing, satisfaction and happiness, social mobility, poverty, literacy, and participation will vary from one development context to another (UN Economic Commission for Asia and the Far East, 1972:140-144).

The unique characteristics and social concerns of each society are not likely to be recognized in the construction of a national system of social statistics

unless social scientists from these countries take an active part in the identification and selections of the conceptual components and empirical procedures leading to the development of the required information system. For this reason, the international contribution of research agencies to social indicator methodologies must necessarily focus on the general methodological procedures of data generation, summary, and presentation for broadly shared areas of development policy concern. Frameworks of social concerns, such as those presented by the UN Economic and Social Council (1972) and by the U.S. Office of Management and Budget (1973), can be derived by the less developed nations through either their own efforts or participation in international symposia. The identification of appropriate social concerns and corresponding indicators for regions of the Third World might follow the precedent set by the member countries of the Organization for Economic Cooperation and Development (OECD, 1973) in identifying social concerns common to member countries

The requirements that proposed improvements in the information systems of LDCs be technically, culturally, socially, politically, and economically feasible narrows the range of practical innovations and alterations for upgrading the system in terms of the role it plays in planning. Within these limits external assistance agencies and international experts can offer useful suggestions for information system improvement. In retrospect, however, many of the contributions of international scientists have been adjudged to be unfeasible for one or more of the reasons discussed above. For example, the sociodemographic accounts or stock and flow model developed by Stone (1971) require far more information than most LDCs are capable of generating at this time.[2] Less complex approaches such as the development of simple descriptive and adalytical indicators have met with a more favorable response, suggesting

that outside innovations when properly suited to conditions found in LDCs can be successfully introduced (McIntosh, et al., 1974). Because these conditions differ between countries in form and degree, general social indicator methodologies must be broad enough to take them into account, yet specific enough to deal with specific societal contexts.

Two implications are apparent from the foregoing discussion. First, existing data sources will have to be utilized to the fullest extent possible in order to reduce the cost of social indicator development and implementation. Second, whatever theoretical framework or approach is selected as a guide to indicator construction will have to be sufficiently adaptable to the current political, economic, cultural, technical, and social constraints found across countries. As these conditions change, and perhaps become less restrictive, methodologies currently unfeasible may become more relevant and practical.

Social Indicators and Their Theoretical Basis

If social indicators are intended to reflect the processes and outcomes of social development, the specification of these processes and products must precede the development of indicators. Yet it is well recognized that only a fraction of developmental consequences and their interrelated causes have been specified. Social development, in the broad sense in which it is normally treated, entails changes in the totality of the social system and its environments thus involving micro to macrolevels of organization. Development thus encompasses the biological, psychological, and the social attributes of individuals; the economic, social and political aspects of institutions and other social system substructure; and the economic, environmental, political, and cultural factors or society. The building of theories of development obviously

calls for the inclusion of a variety of factors including genetic structure, nonhuman resources, climatic factors, personal characteristics, institutionalized values, distribution of economic value and political power, and the international domination/dependence of the nation-state. Theories of development must go beyond the specification of concepts and variables; the crucial aspect of theoretical progress will be a demonstration of "how the factors interact in facilitating or impeding development. . ." (Galtung, 1971:27).

Currently the required theoretical perspectives are at best only partially specified. The dearth of comprehensive societal theories, however, should not prevent the development of social indicators based on the concepts and constructs of partial or middle-range theories of social change and socio-economic development. Of potential worth are the models relating to such aspects of development as social mobility (Deutsch, 1961), individual achievement orientation (McClelland, 1967), and differentiation-institutionalization of new, more adaptive social forms (Eisenstadt, 1964a, 1964b, 1968).

The development of social indicators and further extension and expansion of social theory will likely occur together as has been much the case with their economic counterparts. The formulation of economic indicators and models proceeded simultaneously, each contributing to the advancement of the other. As Moser put it: "In the development of the economic accounts and indicators, pragmatic empiricism and theoretical developments in fact went side-by-side reinforcing each other. It would be untrue to say that their construction was completely based on economic theory" (1973:4).

Prior specification of middle-range theories upon which social indicator work can be based, however, is only a partial answer to the grounding of indicators in theory. Middle-range theories tend to deal with only fragments of the development process, as we might expect. A comprehensive theory of

social development cannot be obtained by simply adding together diverse middle-range theories, for the development process is systemic in nature. Furthermore, we cannot combine theories that often conflict with one another or whose conceptual interrelations are as yet unspecified.

Some of the most useful indicator work to date has been the identification of areas of social concern and their corresponding social indicators. However, this work is limited to the well-being of individuals and to the societal outputs that help maintain and upgrade that well-being. While the welfare of human beings is the ultimate concern of social development, the structures and processes that both provide for and yet limit the levels of living of the population must also be a development concern. Society and its substructures of institutions, stratification systems, and social organizations provides the means through which human biological, psychological, and social needs are met. While social systems may be inefficient and inequalitarian in the manner in which they provide for their individual members, without a societal system which includes a system of distribution and differentiated institutions and organizations, humans could not survive. Thus when we refer to social development, we mean not only upgrading of human well-being per se, but also the increase in the capacity of the various subsystems of society to produce and distribute material and nonmaterial goods, services, and values.

This perspective not only broadens the scope of inquiry beyond a concern for the individual, but it also lends new importance to the individual. From a social system perspective, the continued maintenance and upgrading of the individual's capacity to assume functional roles within social institutions and organizations becomes a necessary consideration. Thus while the individual depends upon a functional social system to meet needs, the social system cannot persist without individuals capable of performing functionally relevant roles.

What is required is an overarching framework inclusive of those units and levels of organization most basic to the study of societal change. Such a framework is essential in order to articulate a greater number of variables and levels of variation of variables than are normally included in middle-range theories. Its greatest value, however, would be in specifying interrelationships among variables drawn from different theories.

Frameworks that deal with society in its totality are relatively scarce in the social sciences, and some might argue the suitability of those that do exist. Yet we believe that a functional model of society provides a useful framework for the purposes of developing and integrating social indicators of development. This proposal is in full recognition of the shortcomings of functionalism, as well as the current tendency to look upon Parsonian functionalism, as having little substantive, formal, and ideological merit.[3]

A Functional Framework for Indicators of Social Development

By functional framework, we mean the so-called "functional theories" of sociology as well as certain compatible biological and motivational generalizations from the field of biological and behavioral psychology. These theories will not be outlined in any detail, but instead some of their implications for the conceptualization and measurement of social development will be examined. The versatile nature of functionalism can provide the necessary organizing perspective that social indicators require from theory, while at the same time coping with the various situational constraints of less developed countries. This perspective is particularly attractive for functionalism is largely concerned with the efficiency and effectiveness of those human activities designed to meet human and societal needs, which are also a basic concern, we believe, in the assessment of social policy and plans.

Furthermore, the perspective is sufficiently broad so as to have the flexibility required of internationally relevant methodologies and at the same time it deals with many of the basic concerns facing the majority of LDCs.

A description of the functional approach as it applies to the problems of basic human needs and their amelioration follows a brief description of society and its interrelated parts.

Society and Its Components

A society is a specialized kind of social system which, like all social systems, is made up of the interaction of human beings (Parsons, 1969:8). The systemically joined elements of society include the societal population, process systems or institutions, and the distribution-stratification system. These elements or subsystems are ordered on the basis of level of organization. Three levels are distinguishable which are of important for the study of social development: the aggregate individual level, the institutional level, and the societal level.

The Aggregate Individual

This first level consists of all the individuals that make up the societal population as well as their various distinguishing morphological characteristics. The societal population is the group of self-perpetuating inhabitants territorially bounded to form society, and its morphology includes size, characteristics, and physical location. Population is important to society for its provision of societal participants through a continued process of population replacement, influence on the structure of human interaction through its size and density, and effect on culture and social organization through its composition. Change in population structure or morphology is also of importance because of its effect on resources and their distribution. In particular, rapid

population growth and unrestricted urbanization tax the resources a nation has to devote to modernization or to alleviating urban conditions.

The Institutional Level

All those processes of human activities that deal with certain social problems in a regularized fashion make up what are termed institutions. Such societal subsystems are the economic, educational, religious, familial, political, and other institutionalized activities "which are partially independent systems with units and boundaries of their own" (Mayhew, 1971:17-18). The institutionalized aspects of process systems are thought of as regulative principles which order the above activities into "definite organizational patterns from the point of view of some of the perennial, basic problems of any society or ordered social life" (Eisenstadt, 1968:410).

The Societal Level

The third and final level consists of society itself. Definitionally, societies are all of the systems of human action sustained by the self-perpetuating inhabitants of a given territorial area (Mayhew, 1971:21).

As systems are more than the simple sum of their parts, societies take on a reality of their own. Society is an analytical construct and has largely been considered in terms of the factors which maintain stability or induce change in the structural pattern of society (Hoselitz, 1972:40; Sofranko and Bealer, 1973:7). Concretely, we choose to equate society with the nation-state, despite the potential shortcomings in doing so (Mayhew, 1971; Black, 1966; Horowitz, 1966). Recognizing that many human process systems are not bounded by the territorial confines of nation-states, or that many cultural and economic systems encompass several nation-states, it is at the national level that most of the major policies and plans impacting human life in given territorial areas are affected. It is at this level that ultimate control

over resource allocation and mobilization is exercised, and it is the national level which provides the highest level of human social integration.

Stratification-Distribution

Cross-cutting and joining these various levels into systemic interdependence is the stratification-distribution system, which forms the basis for distributing resources to the various members of the societal population and creates and controls the societal divisions of labor and other stratification subsystems. The stratification-distribution system is formed by "all the systems of stratification in a society (e.g., the occupation system, the racial-ethnic systems, the property systems, etc.)" (Lenski, 1970:43). Systems of stratification are formations of classes, or aggregates of persons possessing essentially the same amount of a particular resource such as wealth, education, occupation, or any other resource which brings power, prestige, or privilege. Stratification-distribution permeates all societal institutions, hence forming the division of labor in the economy, differential access to power in the polity, and control along age lines over socialization in the family. Differential access by members of the societal population to power, presitge, or privilege manifests itself by two criteria: the location of persons in social as well as physical space. Individuals are regulated in their access to desired resources by both their social and physical distance from these resources.

Needs and Need Level

The common conceptual denominator of some perspectives in physiology (Cannon, 1939), motivational psychology (Hull, 1943; Mace, 1953, Olds, 1955) and sociological functionalism (Malinowski, 1944; Montagu, 1955) is that of "need." At each level of society, a set of needs can be identified which is critical for the continued survival of the social entity(ies) found at that level as well as for the society itself.

Human Needs

Human beings have certain biological needs which are fundamental to their survival. These needs include sustenance and protection requirements such as food and water, protection from disease, and protection from the violent acts of others. Humans also have psychological and social needs, derived from participation in social life, which are internalized as a part of the life-long socialization process. "Derived" needs have been described to include the need to participate in economic activity, to gain skills and knowledge, to learn culturally determined ways of human activity and language, and such needs as "affection, esteem, and self-actualization" (Allardt, 1973b:4). As implied in the societal perspective developed above, the servicing of human needs is the basic reason for the existence of such societal institutions as kinship, polity, religion, economy, and law (Washburn, 1953; Turner, 1972).

Institution Level Needs

Several categories of needs are specific to the institutions of society. To begin with, institutions are made up of status-roles which demand individuals not only knowledgeable about the behavioral expectations that define the institutional roles, but also loyal to the institution which their role activity sustains. Loyalty is involved in the relations between human beings and their society as well as between individuals and the institutional system of which the roles they fill are a part. Loyalty and its individual self-regulation to avoid situations in which competing loyalties cause breakdowns in institutionalized activities are brought about largely through socialization. In addition to loyalty, which is manifest in the individual's willingness to cooperate with others in collective action, there is the question of motivation to become an incumbent of various institutionalized positions as opposed to attempting individual action to meet individual needs, to accept authority,

and to participate in activities, the rewards for which may be differentially distributed. Motivation is provided for partially through socialization which brings about the internalization of the values and norms underlying patterned social behavior, and partially through rewards (providing for social, psychological, and biological needs) and punishments.

Finally, individuals cannot adequately fill the status-role positions they are expected to take as their contribution to the social order unless they are competent to do so. Role competence, in essence, is the possession of the skills, aptitudes, knowledge, and instrumental behavioral details necessary to carry out a particular societal role (Inkeles, 1968; Smith, 1968). Again socialization plays a vital part in producing competence in individuals. "It aims to develop a person who can take care of himself, support others, conceive and raise children, hunt boar or grow vegetables, vote, fill out an application form, drive an auto, and what have you" (Inkeles, 1966:265).

Societal Level Needs

The needs and requisites (Aberle, et al., 1950; Parsons, 1966) at the societal level are primarily the maintenance of internal and external societal relations. Included here are the requirements for a reasonable balance of political and economic resource exchanges across national boundaries, a balanced rate of population replacement, continued territorial integrity, and continuity of basic value systems--which are the cornerstones of the legitimation of institutions and the basic content in the socialization of individuals (Field, 1973; Parsons, 1966).

Social Development and Social Indicators

With this rough outline of society and its substructure and associated needs, the definition of social development can be further elaborated. As noted, needs must be met if each level and, in turn, society as a whole, are

to survive. However, societies do more than survive; some develop and grow, other stagnate, while still others cease to exist.

Social development involves three facets. First, it includes the increased capacity of society to adapt to its social and physical environments through an increasing utilization of energy/information. Second, and relatedly, social development is an increase in society's functional capacity to meet the needs found at the various societal need levels. Third, social development is also the increase in the degree of need satisfaction at each need level. Thus social development is an increase in society's general capacity to survive, an upgrading in society's general capacity to meet needs, and an increase in the need satisfaction at all societal levels.

Social development, as a systemic process affecting the totality of society, has specific consequences for each societal level. At the individual level it means a rise in the level of well-being and greater relative equity in its distribution. At the same time greater demands for increased role competence, acceptance of increased differential in rewards, and a greater integration of loyalties will be expected of individuals. At the institutional level social development appears in the form of increased differentiation-specialization of functions. The formation of new institutions or specialized institutional subunits is a consequence of these processes. In particular, the health system of a society can be viewed as an emerging institution while the existing political and economic institutions continue to subdivide into increasingly specialized tasks. This, in turn, affects individuals who find that their activities become more specialized and compartmentalized in the accompanying process of division of labor. At the societal level social development is the readier attainment of an increasing variety of societal goals and increasing capacity to gain greater control and management over physical, political, and economic environments.

Social indicators, from this perspective, would be required in order to monitor the individual, institutional, and societal consequences of social development as they appear over time. Some social indicators have been devised which measure the degree of need-maintenance and its change over time; other indicators are available which can reflect changes in the structural capacity of society to adapt to its changing environment and to meet its various needs. Examples of the indicators of change in the status of human well-being can be found in the exposition of levels of living proposed by Drewnowski (1970), Allardt (1973a & b), and Mallmann (1973). Examples of empirical referents and proxies for the other levels of need are outlined in Hage (1972), Finsterbusch (1973), Galtung (1971), Taylor and Hudson (1972), and Sofranko and Bealer (1972).

We present in Table 1 our tentative outline of societal components, need levels, and social indicators--some of which are very rough categorical statements rather than fully developed concepts and indicators. The table begins by specifying the level of societal need: individual, institutional, or societal. Each of these levels is then broken down into its characteristic attributes, followed by further specification in terms of particular needs that make up each attribute. For example, the individual level contains biological, psychological, and social attributes, each of which represent a constellation of individual needs. Examination of the individual level attribute of "social" gives education, security and income, employment, and working conditions as constituent needs.

While this perspective on society and its development has its limitations, it appears to us to begin to deal with the critical factors of theoretical grounding and implementability. The approach is sufficiently broad so that it may be adapted to particular national conditions and yet meaningful in terms of the developmental concerns of theory and practice. We hope that it will at the very least serve as a catalyst to stimulate further efforts to develop social indicator methodologies that are both theoretically meaningful and feasible for the Third World.

Table 1. A Functional Framework for the Specification of Social System Levels, Attributes, Associated Needs, and Social Indicators

Level	Attribute	Need	Need-Component	Social Indicator (with cross classification by relevant areas, demographic ethnic, religion, & socioeconomic categories)
1. Individual	Biological	Air	Clean air intake	Air pollution indices (various)
		Water	Water intake	Water intake per day per head as a percentage of standards; water quality indices
		Nutrients	Calorie, protein, vitamin, fat intake; level of nutrition	Calorie intake per person, protein intake, vitamin intake per day as a percentage of standards; percent of population with third-degree malnutrition
		Health	Avoidance of death Life free of disease and disability	Mortality rates Morbidity rates Life expectancies
		Housing	Amenities per dwelling Density of occupancy Usage of dwelling Classification of ownership	No. and type of amenity per dwelling Rooms per inhabitant No. and types of usages of dwelling Owner identification and proportion of income spent on rent
		Leisure and recreation	Allocation of time to work; part-time work, and leisure activities	Proportion of active hours devoted to work, semiwork and nonwork leisure
	Psychological	Love Belonging	Solidarity of relationships	Proportion of personal relationship[a] of a "solidary" nature
		Self-actualization	Insubstitutability in relationships	Insubstitutability in work or everyday relations Importance in a group of friends or companions

[a] See Allardt (1973b) for the specific operationalizations of these indicators.

Table 1. (cont.) A Functional Framework for the Specification of Social System Levels, Attributes, Associated Needs, and Social Indicators

Level	Attribute	Need	Need-Component	Social Indicator (with cross classification by relevant areas, demographic ethnic, religion, & socioeconomic categories)
1. Individual (cont.)	Social	Education	Learning opportunity	Literacy rate; enrollment rate; nature and incidence of skills
		Security	Maintenance of law and order	Crime rates (by type of offense) Victimization rates
			Security of income	Fluctuations in income level, employment rate, and inflation rate
		Income,	Available income	Amount of wage as a proportion of average wage
		Employment	Employment opportunity	Employment rate by primary, secondary, and tertiary sector
		Working conditions	Reasonable working conditions	Hours of work; no. of holidays; sanitation, lighting, and ventilation rates as a percentage of norms
			Social access	Access to goods, services, and values Degree of inequality in the distribution of socioeconomic goods and services Sectoral income distribution Land distribution
			Physical access	Physical distance between individuals and distribution facilities of socioeconomic goods and services by class, ethnicity, etc.
				Local and regional distribution of production, transportation, and distribution facilities

Table 1. (cont.) A Functional Framework for the Specification of Social System Levels, Attributes, Associated Needs, and Social Indicators

Level	Attribute	Need	Need-Component	Social Indicator (with cross classification by relevant areas, demographic ethnic, religion, & socioeconomic categories)
2. Institutional	Roles	Recruitment		Population growth rate
		Performance		Unfilled occupational categories as a proportion of all occupations
		Integration		Degree of interaction among new organizations & institutions as compared with expectations
		Differentiation	Status-role proliferation	No. of new status-roles per year; change in role requirements within institutions; no. of new occupations added to labor force each year
	Outputs	Individual competence	Specifics of competence	Performance of status-role incumbents within institutions
	Performance	Goods and services	Specific institutional outputs (e.g., educational, economic, etc.)	Agricultural output by crop[b]
				No. of graduates from all schools by skill
				Teacher/student rate
				No. of patients treated by all health facilities
				No. of new schools
				No. of new hospitals; health personnel
				No. of participants in nutrition and family health & planning programs

[b] Because of the great number of institutional outputs found in every society, only a few examples are listed here.

Table 1. A Functional Framework for the Specification of Social System Levels, Attributes, (cont.) Associated Needs, and Social Indicators

Level	Attribute	Need	Need-Component	Social Indicator (with cross classification by relevant areas, demographic ethnic, religion, & socioeconomic categories)
3. Societal	Internal	Adaptation	Population replacement	Rate of natural increase
			Population density	No. of persons per unit area of territory
			Territorial integrity	Amount of territory lost/gained through conflict or international arbitration
			Resource endowment	Amount and value of natural resources
			Resource utilization	Degree of resource exploitation
	External		Knowledge and technology	Amount and level of science and technology
			Dependence/domination	Balance of payments
	Internal	Goal attainment	Achievement of national goals	Number and degree of attainment national goals
	Internal	Integration	Integration in the economy	Degree of participation in national economy
				Extent of the appearance of regional growth centers
	Internal		Integration in the polity	Proportion of rural eligible voters participating in national elections
				Proportion of minority group representation in governmental positions per 100,000 minority group citizens
				Proportion of annual national budget allocated to rural development
	Internal	Pattern maintenance	Continuity of value systems and institutional maintenance	Marriage and divorce rates Religious practices No. of riots and other disturbances Suicide rates

FOOTNOTES

[1] See McIntosh, et al., 1974, for a discussion of the research that has been carried out in Thailand.

[2] This was the outcome of a Conference of Asian Statisticians in Bangkok in December, 1971.

[3] Refer to Gouldner, (1959 and 1970); Scott, (1963); Turk, (1967) and others for critiques. See Turner, (1974) and Turner and Beeghley, (1974) for trenchant rejoinders.

LITERATURE CITED

Aberle, D. F., A. K. Cohen, A. K. Davis, M. J. Levy and F. X. Sutton
1950 "The functional prerequisite of a society." Ethics 60(2) (January):100-111.

Allardt, Erik
1973a "A welfare model for selecting indicators of national development." Policy Science 4(3):63-74.

1973b About Dimensions of Welfare: An Explanatory Analysis of a Comparative Scandinavian Study. Research Group for Comparative Sociology, University of Helsinki. Research Report No. 1. Helsinki.

Bauer, Raymond A.
1966 "Detection and anticipation of impact: The nature of the task." Pp. 1-67 in Raymond A. Bauer (ed.), Social Indicators. Cambridge: MIT Press.

Black, C.E.
1966 The Dynamics of Modernization: A Study in Comparative History. New York: Harper and Row.

Bush, J. W., S. Fanshel, and M. M. Chen
1972 "Analysis of a tuberculin testing program using a health status index." Socio-Economic and Planning Sciences 6:49-68.

Callaghan, John, Leslie D. Wilcox, Kerry J. Byrnes, Saundra M. Hunter, and Song-Min Kim
1974 A Methodology for Indicators of Social Development. Report 4: Health Sector Information System. Department of Sociology and Anthropology, Ames, Iowa: Iowa State University.

Cannon, Walter B.
1939 The Wisdom of the Body. New York: W. W. Norton and Co.

Deutsch, Karl W.
1961 "Social mobilization and political development." American Political Science Review 55 (September):493-514.

Drewnowski, Jan
1970 Studies in the Measurement of Levels of Living and Welfare. Report No. 70.3. United Nations Research Institute for Social Development. Geneva: UNRISD.

Duncan, Otis Dudley
1969 Toward Social Reporting: Next Steps. New York: Russell Sage Foundation. Paper Number 2 in the Social Science Frontiers Series.

Dunn, Edgar S., Jr.
1972 "The national data bank movement in the United States." American Statistical Association 1973 Proceedings of the Business and Economic Statistics Section, Detroit, December 27-30.

Eisenstadt, S. N.
1964a "Institutionalization and change." American Sociological Review 29(2) (March):235-247.

Eisenstadt, S. N.
1964b "Social change, differentiation, and evolution." American Sociological Review 29(3) (June):375-386.

1968 "Social institutions." In David L. Sills (ed.), International Encyclopedia of the Social Sciences. New York: Macmillan and The Free Press. Vol. 14:409-421.

Field, Mark
1973 "A sociological perspective on applied multidisciplinary research in the Third World." et. Civilization. Special Issue. Nos. 45/46 (September/December):99-106.

Finsterbusch, Kurt
1973 "The sociology of nation-states: Dimension, Indicators, and theory." Pp. 417-453 in Arnie Michal and Allan D. Grimshaw (eds.), Comparative Social Research. Toronto: John Wiley and Sons.

Galtung, Johan
1971 Members of Two Worlds: A Development Study of Three Villages in Western Sicily. New York: Columbia University Press.

Gouldner, Alvin W.
1959 "Reciprocity and autonomy in functional theory." In Llewllyn Gross (ed.), Symposium on Sociological Theory. New York: Row, Peterson, & Co.

1970 The Coming Crisis of Western Sociology. New York: Basic Books.

Hage, Gerald
1972 Techniques and Problems of Theory Construction in Sociology. New York: John Wiley & Sons.

Hauser, Phillip M.
1969 "Statistics and politics." The American Statistician 27(2) (April): 68-71.

Henriot, Peter J.
1972 Political Aspects of Social Indicators: Implications for Research. New York: Russell Sage Foundation. Paper Number 4 in the Social Science Frontiers Series.

Horowitz, Irvin Louis
1966 Three Worlds of Development: The Theory and Practice of International Stratification. New York: Oxford University Press.

Hoselitz, Bert F.
1972 "Development and the theory of social systems." Pp. 39-78 in Manfred Stanley (ed.), Social Development. New York: Basic Books.

Hull, Clark L.
1943 Principles of Behavior: An Introduction to Behavior Theory. New York: Appleton.

Inkeles, Alex
1966 "Social structure and the socialization of competence." Harvard Educational Review 36:265-283.

1968 "Society, social structure, and child socialization." Pp. 73-129 in John A. Clausen (ed.), Socialization and Society. Boston: Little, Brown, and Co.

Keller, Eugene
1973 "Politicizing statistics." Dissent 20(2):142-145.

Land, Kenneth C.
1972 "Social indicator models: An overview." Unpublished paper. New York: Russell Sage Foundation

Lenski, Gerhard
1970 Human Societies: A Macrolevel Introduction to Sociology. New York: McGraw-Hill.

Mace, Ceil Alec
1953 "Homeostasis, needs, and values." British Journal of Psychology 44(4):201-212.

Malinowski, Bronislaw
1944 A Scientific Theory of Culture and Other Essays. Chapel Hill: University of North Carolina Press.

Mallmann, Carlos
1973 "On the satisfaction of human aspirations as the development objective." A paper presented at the Symposium on "Science, Technology, and Human Values." (Mexico City, July). Argentina: Bariloche Foundation.

Mayhew, Leon
1971 Society: Institutions and Activity. Glenview: Scott, Foresman, and Co.

McClelland, David C.
1967 The Achieving Society. New York: Free Press.

McGranahan, Donald V.
1972 "Development indicators and development models." Pp. 85-110 in Nancy Baster (ed.), Measuring Development: The Role and Adequacy of Development Indicators. London: Frank Cass.

McIntosh, Wm. Alex, Leslie D. Wilcox, George M. Beal, and John Callaghan
1974 A Methodology for Indicators of Social Development. Report 5: Social Information and Development Planning in Thailand. Department of Sociology and Anthropology, Ames, Iowa: Iowa State University.

Montagu, M. F. Ashley
1955 The Direction of Human Development. New York: Harper and Brothers.

Moore, Lawrence
1971 Social Policy and the Politics of Social Development. International Social Development Review. ST/SOA/Ser. X/3. No. 3. New York: United Nations.

Moser, Claus A.
1973 "Social indicators: Systems, methods, and problems." Unpublished paper. London: Central Statistical Office.

Myrdal, Gunnar
1968 Asian Drama: An Inquiry into the Poverty of Nations (abridged edition). New York: Vintage Books.

Ogburn, William F.
1964 On Culture and Social Change. Chicago: University of Chicago Press.

Olds, James
1955 "Physiological mechanisms of reward." Pp. 73-139 in Marshall R. Jones (ed.), Nebraska Symposium on Motivation. Vol. 3. Lincoln: University of Nebraska Press.

Organization for Economic Cooperation and Development
1973 List of Social Concerns Common to Most OECD Countries. Paris: OECD.

Parsons, Talcott
1966 Societies: Evolutionary and Comparative Perspectives. Englewood Cliffs: Prentice-Hall, Inc.

1969 Politics and Social Structure. New York: Free Press.

Perle, Eugene D.
1970 "Notes on urban information systems and urban indicators." A paper presented at the Annual Meetings of the Association for Computing Machinery (September 1, New York City). Detroit: Wayne State University.

Rose, Richard
1971 "The market for policy indicators." Pp. 119-141 in Andrew Shonfield and Stella Shaw (eds.), Social Indicators and Social Policy. London: Heinemann Educational Books Limited.

Seers, Dudley
1972 "The meaning of development." Pp. 123-129 in Norman T. Uploff and Warren F. Ilchaman (eds.), The Political Economy of Development. Berkeley: University of California Press.

Scott, Joseph F.
1963 "The changing foundation of the Parsonian action scheme." American Sociological Review 28 (October):716-735.

Sheldon, Eleanor Bernert and Robert Parke
1974 "Social indicators: Social science researchers are developing concepts and measures of changes in society." Unpublished paper. Washington, D.C.: Social Science Research Council.

Smith, Brewster M.
1968 "Competence and socialization." Pp. 270-320 in John A. Clausen (ed.), Socialization and Society. Boston: Little, Brown, and Co.

Sofranko, Andrew J. and Robert C. Bealer
1973 Unbalanced Modernization and Domestic Instability: A Comparative Analysis. Comparative Politics Series, Vol. 3. Beverly Hills: Sage Publications.

Stone, Richard
1971 Demographic Accounting and Model-Building. Paris: Organization for Economic Cooperation and Development.

Taylor, Charles Lewis and Michael C. Hudson
1972 World Handbook of Political and Social Indicators. Second Edition. New Haven: Yale University Press.

Tunstall, Daniel B.
1972 Discussion paper. Proceedings of the American Statistical Association (Montreal, August 14-19):89-92.

Turk, Austin
1967 "On the Parsonian approach to theory construction." Sociological Quarterly 8(1) (Winter):37-50.

Turner, Jonathan H.
1972 Patterns of Social Organization: A Survey of Social Institutions. New York: McGraw-Hill.

1974 The Structure of Sociological Theory. Homewood: Dorsey Press.

Turner, Jonathan H. and Leonard Beeghley
1974 "Current folklore in the criticisms of Parsonian action theory." Sociological Inquiry. 44(1): 47-55.

Uathavikul, Phaichitr
1972 "Integrated social and economic planning: National and subnational problems and policy." International Social Development Review. United Nations ST/SOZ/Ser. X/4. No. 4. New York: United Nations.

United Nations Economic Commission for Asia and the Far East
1970 Social Development in Asia. ECAFE Social Development Series No. 2. Bangkok.

1972 Population Aspects of Social Development. Report on a regional seminar and selected papers. Asian Population Studies Series No. 11. E/CN.11/1049. Bangkok.

United Nations Economic Commission for Asia and the Far East (Social Development Division)
1969 "The planning and financing of social development in the ECAFE region." United Nations Economic Bulletin for Asia and the Far East. E/CN.11/676. New York: United Nations

1972 "Data requirements for unified development planning." In Population Aspects of Social Development; Report of a Regional Seminar and Selected Papers. Asian Population Series K12.11.EN/CN.11/1049. Bangkok: ECAFE.

United Nations Economic and Social Council (Statistical Commission)
1972 "A system of demographic and social statistics and its line with the system of national economic accounts." 5/CN.3/432. (April 3). Geneva: United Nations. Mimeographed.

U.S. Department of Health, Education, and Welfare, National Center for Health Statistics
1972 "Statistics for comprehensive health planning." The Public Health Conference on Records and Statistics. Document No. 618.12.

United States Office of Management and Budget
1973 Social Indicators - 1973. Washington, D.C.: U.S. Government Printing Office.

Washburn, Norman F.
1953 Interpreting Social Change in America. New York: Random House.

Waterston, Albert
1971 Development Planning: Lessons of Experience. Baltimore: Johns Hopkins Press.

Wilcox, Leslie D., Wm. Alex McIntosh, Kerry J. Byrnes, John Callaghan, Saundra M. Hunter, Song-Min Kim, and Rowena James
1973 A Methodology for Indicators of Social Development. Report 2: An Analysis of Selected A.I.D. Operational Indicators and Concepts. Department of Sociology and Anthropology, Ames, Iowa: Iowa State University.

Wilcox, Leslie D., Wm. Alex McIntosh, and John Callaghan
1974 A Methodology for Indicators of Social Development. Report 3: Toward An Integrated Social Information System. Department of Sociology and Anthropology, Ames, Iowa: Iowa State University.

Wolfe, Marshall
1973 Development: Images, Conceptions, Criteria, Agents, Choices. Economic Bulletin for Latin America 8(2):3-27.